

REMARKS

The rejection of Claims 1, 3-18 and 20-36 under 35 U.S.C. § 103(a) as unpatentable over either one of JP 9-227572 (JP '572) or EP 0727608 (EP '608) in view of US 6,432,176 (Klos et al), is respectfully traversed.

As recited in above-amended Claim 1, with regard to the metallo-organic framework material, the at least one at least bidentate organic compound of the present invention is now limited to benzenedicarboxylate (BDC) or benzenetricarboxylate (BTC), and the at least one metal ion is now limited to Zn^{2+} . Neither JP '572 nor EP '608 meets these limitations. All of the ligands disclosed in JP '572 contains a nitrogen atom [0012], and thus there is no disclosure or suggestion of using a BDC or a BTC. EP '608 discloses that their organometallic complex has a one-dimensional channel structure (page 2, lines 36-40), which organometallic complex contains a metal (page 2, line 47ff), wherein zinc is not described. Note that the two framework materials herein, i.e., BDC and BTC, one of them also called MOF-5, are well-known in the art and show a three-dimensional structure. Applicants submit that it is surprising that these easy to prepare and build up framework materials are capable of storing a gas in an optimized pressure range. Thus, neither JP '572 nor EP '608 discloses or suggests the presently-recited combination of a particular at least one metal ion and a particular at least one at least bidentate organic compound.

Nor does the above prior art disclose or suggest the presently-recited pressure range of 40 to 70 bar. Individual pressures of 30 bar and 35 bar do not suggest a minimum of 40 bar.

Klos et al has been relied on for its disclosure of cylindrical as well as non-cylindrical containers for gas storage and thus, does not remedy the fundamental deficiencies in JP '572 and EP '608.

For all the above reasons, it is respectfully requested that this rejection be withdrawn.

The rejections of claims on the grounds of non-statutory obviousness-type double patenting over Claims 1 and 4-15 over US 6,929,679 (Muller et al) alone, or Muller et al in view of Klos et al, are respectfully traversed. The claims of Muller et al neither disclose nor suggest the presently-recited pressure range, or the at least one metal ion, or the at least one at least bidentate organic compound. Klos et al does not remedy these deficiencies.

Accordingly, it is respectfully requested that these rejections be withdrawn.

All of the presently-pending claims in this application are now believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Respectfully submitted,

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DISCUSSION OF THE AMENDMENT

Claim 1 has been amended by limiting the at least one metal ion and the at least one at least bidentate organic compound, as supported in the specification at page 13, line 1 combined with page 14, lines 8-12. Claims 14 and 31 have been amended to be consistent with the amendment to Claim 1. Claims 4, 5, 7, 21, 22 and 24 have been canceled.

No new matter is believed to have been added by the above amendment. With entry thereof, Claims 1, 3, 6, 8-18, 20, 23 and 25-36 will be pending in the application.